BOX PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Patrick J. Evans Attorney Docket No.: AGIT117605

Title: DISSOLVED HYDROGEN ANALYZER

PRELIMINARY AMENDMENT

Seattle, Washington 98101

TO THE COMMISSIONER FOR PATENTS:

Please amend the above-referenced divisional patent application as follows

In the Specification:

At page 1, after the title, please enter the following information:

CROSS-REFERENCE TO RELATED APPLICATION

The present application is a divisional of prior United States Patent Application No. 09/273,958, filed on March 22, 1999, priority from the filing date of which is hereby claimed under 35 U.S.C. § 120. The entire disclosure of the prior application, from which priority is claimed, is considered as being part of the disclosure of this application and is hereby incorporated by reference herein.

GOVERNMENT RIGHTS

In the Claims:

Please cancel Claims 1-19 and amend Claim 22 as follows:

20. A process for measuring the amount of dissolved hydrogen in a solution comprising the steps of:

(a) equilibration of liquid containing dissolved hydrogen with a carrier gas;

(b) removal of oxygen from the carrier gas containing hydrogen; and

(c) measuring the amount of hydrogen in the carrier gas that has been treated to remove oxygen.

21. The process of Claim 20, wherein said removal step neither consumes nor

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produces hydrogen.

22. (Amended) The process of Claim 20, wherein step (b) further comprises removal of carbon monoxide from the carrier gas containing hydrogen.

23. The process of Claim 20, wherein step (b) further comprises removal of sulfur compounds from the carrier gas containing hydrogen.

24. The process of Claim 20, wherein step (b) further comprises removal of moisture from the carrier gas containing hydrogen.

25. The process of Claim 20, wherein a metal oxide semiconductor is used to measure the concentration of hydrogen.

26. The process of Claim 25 wherein hydrogen concentration is measured by monitoring an output voltage from the metal oxide semiconductor and calculating the rate of voltage increase.

27. The process of Claim 20, wherein step (b) further comprises the removal of carbon monoxide at a temperature of 55C° to 80°C.

28. The process of Claim 20, wherein in step (a) the liquid containing dissolved hydrogen is an aqueous sample of contaminated groundwater, further comprising a step (d) of determining the status of bioremediation using the hydrogen content measured in step (c).

29. The process of Claim 28, wherein step (d) comprises monitoring hydrogen content to determine the status of natural attenuation of contaminants.

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REMARKS

The Examiner is requested to enter the foregoing amendments to the specification and claims.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE JUNE 20, 2001

In the Specification:

A new section has been added on page 1 after the title, as follows.

CROSS-REFERENCE TO RELATED APPLICATION

The present application is a divisional of prior United States Patent Application No. 09/273,958, filed on March 22, 1999, priority from the filing date of which is hereby claimed under 35 U.S.C. § 120. The entire disclosure of the prior application, from which priority is claimed, is considered as being part of the disclosure of this application and is hereby incorporated by reference herein.

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20. A process for measuring the amount of dissolved hydrogen in a solution comprising the steps of:

(a) equilibration of liquid containing dissolved hydrogen with a carrier gas;

(b) removal of oxygen from the carrier gas containing hydrogen; and

(c) measuring the amount of hydrogen in the carrier gas that has been treated to remove oxygen.

21. The process of Claim 20, wherein said removal step neither consumes nor produces hydrogen.

22. (Amended) The process of Claim 20, wherein step [(6)] (b) further comprises removal of carbon monoxide from the carrier gas [continuing] containing hydrogen.

23. The process of Claim 20, wherein step (b) further comprises removal of sulfur compounds from the carrier gas containing hydrogen.

24. The process of Claim 20, wherein step (b) further comprises removal of moisture from the carrier gas containing hydrogen.

25. The process of Claim 20, wherein a metal oxide semiconductor is used to measure the concentration of hydrogen.

26. The process of Claim 25 wherein hydrogen concentration is measured by

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monitoring an output voltage from the metal oxide semiconductor and calculating the rate of voltage increase.

27. The process of Claim 20, wherein step (b) further comprises the removal of carbon monoxide at a temperature of 55C° to 80°C.

28. The process of Claim 20, wherein in step (a) the liquid containing dissolved hydrogen is an aqueous sample of contaminated groundwater, further comprising a step (d) of determining the status of bioremediation using the hydrogen content measured in step (c).

29. The process of Claim 28, wherein step (d) comprises monitoring hydrogen content to determine the status of natural attenuation of contaminants.

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